

105.12 - Respirable Materials

SRMs 1878b and 1879b are crystalline silica materials with particle size in the respirable range. They are intended for use in determining, by x-ray diffraction, the levels of respirable silica in an industrial atmosphere according to National Institute for Occupational Safety and Health ([NIOSH](#)) Analytical Method 7500 or equivalent methods. **NOTE:** These SRMs are not certified for particle size.

Also see [Table 105.10 Respirable Materials on Filter Media](#).

PLEASE NOTE: The tables are presented to facilitate comparisons among a family of materials to help customers select the best SRM for their needs. For specific values and uncertainties, the certificate is the only official source.

SRM	1648a	1649b	1650b	1866b	1877	1878b	1879b	1975	2583	2584	2585	2786	2787	2975
Description	Urban Particulate Matter	Urban Dust	Diesel Particulate Matter	Common Commercial Asbestos	Beryllium Oxide Powder	Respirable Alpha Quartz (Quantitative X-Ray Powder Diffraction Standard)	Respirable Cristobalite (Quantitative X-Ray Powder Diffraction Standard)	Diesel Particulate Extract	Trace Elements in Indoor Dust (Nominal Mass Fraction of 90 mg/kg Lead)	Trace Elements in Indoor Dust (Nominal Mass Fraction of 1 % Lead)	Organic Contaminants in House Dust	Fine Atmospheric Particulate Matter (Mean Particle Diameter < 4 µm)	Fine Atmospheric Particulate Matter (Mean Particle Diameter < 10 µm)	Diesel Particulate Matter
Unit of Issue	(2 g)	(2 g)	(200 mg)	(set (3))	(20 g)	(5 g)	(5 g)	(4 x 1.2 mL)	(8 g)	(8 g)	(10 g)	(100 mg to 140 mg)	(100 mg to 140 mg)	(1 g)
Measurand(s)	Certified: 25 elements, 21 PAHs, 7 PCBs Reference values: 8 elements, 54 PAHs, 16 nitro-PAHs, 46 PCBs, 34 pesticides	Certified: 3 elements, 23 PAHs, 13 PCBs, 4 pesticides Reference values: 1 element, 38 PAHs, 16 nitro-PAHs, 49 PCBs, 34 pesticides	Certified: 26 PAHs, 7 nitro-PAHs Reference values: 59 PAHs, 16 nitro-PAHs	chrysotile, amosite, crocidolite	35.76 % beryllium	96.73 % alpha quartz	93.98 % cristobalite	Certified: 8 PAHs, 4 nitro-PAHs Reference values: 23 PAHs, 15 nitro-PAHs, mutagenicity, residue mass	Certified: 5 elements	Certified: 5 elements Reference values: 10 elements	Certified: 33 PAHs, 30 PCBs, 4 pesticides, 15 PBDEs Reference values: 33 PAHs, 12 PCBs, 10 pesticides, 3 PBDEs, 5 polycyclic musks, 8 PFAAs	Certified: 25 PAHs, 2 nitro-PAHs, 2 PBDE, 8 elements Reference values: 27 PAHs, 5 nitro-PAHs, 13 elements, 3 sugars, 5 PBDE, 12 dioxins, 15 furans	Certified: 23 PAHs, 2 nitro-PAHs, 2 PBDE, 7 elements Reference values: 27 PAHs, 5 nitro-PAHs, 5 PBDE, 14 elements, 3 sugars, 12 dioxins, 15 furans	Certified: 10 PAHs, 7 nitro-PAHs Reference values: 36 PAHs, 9 nitro-PAHs, particle-size, total extractable mass

- Certified values are normal font
- Reference values are italicized
- Values in parentheses are for information only